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ABSTRACT

This study compared the behaviors of mainstreamed disabled students to those of their normative peers in the same classroom. Observational sessions were conducted in 48 classrooms in 3 rural West Virginia school districts. Data were collected on 71 disabled students in grades 3-7 over a 4-week period, including students with mild mental impairments, learning disablities, and behavior disorders. All students had been included in the regular classroom for at least 1 month. The Classroom Behavior Record was used to record 15 discrete classes of behavior in 6-second intervals. The process involved alternately recording the behavior of targeted disabled students and that of their nondisabled peers. Results indicate that the social interactions of disabled students with peers and teachers were quantitatively and qualitatively comparable to those of their normative peers. Disabled students were not observed to differ significantly from their peers in measures of instructional interaction with the teacher. However, disabled students were significantly less likely to be observed as attentive than their normative peers, and the level of attention of disabled students was lower in classrooms where additional adults were present. (LP)

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CLASSROOM BEHAVIORS OF STUDENTS IN RURAL MAINSTREAMED SETTINGS: A COMPARISON OF STUDENTS WITH DISABILITIES AND THEIR NORMATIVE PEERS

In the past decade, literature in the field of special education has addressed difficulties inherent in educating children with disabilities in separate special education A veritable barrage of criticism regarding segregated service delivery has focused on the lack of demonstrated efficacy of special education, the potentially detrimental effects of stigmatizing students with disabilities by labeling them, and the possible effects of depriving students with disabilities of their civil rights when the "dual" system of special and general education does not allow students with disabilities equal educational opportunities (Bradley, 1993; Skrtic, 1991; Stainback & Stainback, 1984; Will, 1986). Kauffman , Gerber & Semmel (1988) suggest that the assumptions made by the ideologists, although appealing, are not supported by empirical data and are arguable. Several authors have argued that the debate regarding inclusion has centered often on ideology and little on data (Braaten, Kauffman, Braaten, Polsgrove & Nelson, 1988; Kauffman, Gerber & Semmel, 1988).

Recent reports claim that nationwide over two-thirds of the 4.5 million students identified as exceptional are currently taught in general education settings. Thirty-one per cent of these students spend the entire school day in general education classes (Heward & Orlansky,1992). Another thirty-eight percent are enrolled in mainstreamed settings on a part time basis (United States Department of Education, 1992). Historically, rural school districts typically offered fewer special education services and had a lower percentage of self-contained special education classrooms than urban school districts. (Helge, 1984). The extent to which rural school districts have participated in the inclusion movement varies greatly from state to state and even between school districts within the same state (Shapiro, Loeb, Bowermaster, Wright, Headden, & Toch, 1993). Shortages of trained personnel, populations scattered over vast land areas, and isolation are common issues in rural school districts. These factors contribute to difficulties implementing the full continuum of special education services (Helge, 1991). Therefore, in the case of rural school districts, the movement towards inclusion may have more to do with the problems inherent in rural special education service delivery than with the assertions proposed by the ideologists.

The terms mainstreaming, inclusion, and integration reference attempts to comply with the least restrictive environment (LRE) provisions of original special education mandates (Education for All Handicapped Children Act, PL94-142, 1975). Although schools may be facing inclusion efforts for the first time, mainstreaming efforts have a longer history for the majority of both urban and rural school districts. The accumulated research literature on mainstreaming can provide useful data to identify effective processes for including students with disabilities in general educational settings. Useful information can also be derived from observational data collected from mainstreamed classrooms in rural school districts.

OBSERVATIONAL METHODS

Direct observation methods have traditionally been used to measure treatment effects. This methodology has also been employed by researchers studying the effects of mainstreaming on the behaviors of students and teachers. Using direct observation of the behaviors of students in mainstream settings can provide empirical data for assessing levels of engagement of students with disabilities. Direct observational methods are also useful in noting discrepancies between the students' behavior and that of their normative peers (Forness & Esveldt, 1974; Walker & Hops, 1976). Obtaining this comparative data on students with disabilities and their normative peers provides valuable data regarding the acceptable levels of behavior tolerated in the mainstream and considered "normal." Recording systems that describe and record a reasonably comprehensive number of student behaviors may be most efficacious for presenting the behaviors of target students, and normative peers in a classroom environment.

Selection of the comparison samples is very important to consider. The comparison sample provides the context for interpreting the normative acceptable behavior. Paired comparisons which use only one or two selected peers and /or teacher selected peers may introduce unnecessary bias. Collecting observation data on the behaviors of students participating in the same classroom experience provides a representative context for interpreting the observed behaviors of students with disabilities (Walker & Hops, 1976).

The complexity of the mainstream setting is evidenced in the uniqueness of normative behavior patterns, and variety in classroom activity structures. These considerations represent critical classroom features for planning and monitoring systematic inclusion of students with disabilities. Observation methods provide a particularly suitable means of gathering valid and reliable data to explore the unique features of rural mainstream classroom environments. Additionally, observational data assists in identifying effective approaches for successful mainstreaming.

The purpose of this study was to collect observational data on the behaviors of students with disabilities so as to compare their behavior to that of their normative peers in the same classroom. Specifically data was collected to ascertain if students with disabilities interacted differently with teachers and peers than did their normative peers in the mainstream setting. We also sought to determine if students with disabilities differed in the amount and quality of observed academic engagement than their normative peers.

METHODS

SAMPLE

Observations were conducted in three north central rural West Virginia school districts. Seventy-one observational sessions were conducted in 48 classroom settings. The classroom observations included grade levels 3rd through 7th. Data were collected over a four week period in the second semester of the academic year. A total of 71 students with disabilities were observed. Based on the West Virginia categorical service delivery model, 13 were students with mild mental impairments, 45 were students with learning disabilities, and 13 were students experiencing behavior disorders. All students had been included in the classroom for at least one month. Each classroom contained a range of 12-26 students with a mean of 21.3. Each classroom contained a range of 1-8 students with disabilities with a mean of 2.3. The number of adults in each classroom ranged from 1 to 3 with a mean of 1.2.

CLASSROOM BEHAVIOR RECORD (CBR)

The Classroom Behavior Record (CBR) developed by Fitzgerald, Nichols, & Whittaker (1992) was used to collect the data for this study. The Classroom Behavior Record is an observational tool for collecting systematic observations regarding the behavior of children with disabilities. The CBR provides for the recording of fifteen discrete classes of behavior in six second intervals in which recording of the behavior of a targeted student is alternated with recording the behavior of each member of the peer group in the classroom in rotating fashion.

Six second intervals were cued by a beeper mechanism. These sounds were heard only by the observer through an ear piece. All observational and demographic data were recorded on CBR protocols. Classroom behaviors observed were coded according to the following behavioral definitions:

Positive Behavior Codes

AT **ATTEND/ON TASK**
On-task school-related behavior. Student attends to material or activities assigned or approved by the teacher. Seatwork. Quiet, approved play. May include incidental sound that is not distracting. Self-directed speech may be coded AT or as a special variable.

IM **INCIDENTAL MOTOR**
Low level motor activity that does not distract oneself or others. Student is on-task or otherwise engaged in teacher-approved activities.

II **INSTRUCTIONAL INTERACTION**
Instructional interactions around academic or instructional content. Recitations in class, hand raising, contributions of ideas to class, group response to teacher's question. Verbal or nonverbal prompting may be coded II or as special variable.

PP **POSITIVE WITH PEER**
Verbal or nonverbal interactions with peers that are not in violation of classroom rules. May be of academic or non-academic content.

PT **POSITIVE WITH TEACHER**
Verbal or non-verbal interactions with teacher that are non-academic but are school- appropriate. Must be initiated by the student or as a pleasant response to a teacher-initiated interaction.

CO **COMPLY**
Compliance with a verbal or non-verbal direction, command, threat or rule made to the student individually or as one of a group. Does not include requests for an answer to an academic question. Code only in the first interval compliance can reasonably be expected after the command (up to 12 sec. is allowed).

AG **APPROVAL GAINED**
Verbal or non-verbal approval gained from the teacher or another adult directed toward the student alone or as part of a group. Teacher's approving statement, physical touch, or reward of a token or point. Approval may be a general positive statement or it may be contingent upon a specific behavior.

V1 **OPEN VARIABLES**
V2 Specific positive behavior or combination of positive behaviors are selected for tracking because they are unusual or significant in a given observation or not adequately described in the routine

behavior code. Usually given precedence over other coding options as they are of special interest to the observer.

Negative Behavior Codes

FA FAIL TO ATTEND/OFF TASK
Off-task, non-verbal behavior. Student attends to materials or activities other than those assigned by the teacher. Looking around with wandering gazes or preoccupied stare, watching other students, looking at non-assigned materials. Not obtrusive or disruptive.

PL PLAY WITH OBJECT
Off-task, nonverbal behavior where student manipulates an object or playing with toys or materials.

MN MOTOR/NOISE OBTRUSIVE
Obtrusive, often repetitive motor or noise behaviors that demonstrate restlessness, inattentiveness, impulsivity, self-stimulation, or minor rule breaking. Wiggling in seat, nose picking, distracting vocal or non-vocal sounds. This may occur when student is out-of-seat, so long as student is not disruptive to others. Behaviors are obtrusive in classroom but do not cause disruption. Unusual self-absorbing behaviors such as spinning, self-abusing, hand-biting, or masturbating may be coded MN or as special variables (V3, V4).

DD DISRUPTIVE, DESTRUCTIVE
Actions that disrupt classroom process. Loud talk or noises, high-rate or intense motor behaviors, throwing or spoiling materials, tantrums, loud whispering. Includes out-of-seat behavior if student is disruptive to others or potentially disruptive to others.

NP NEGATIVE WITH PEER
Verbal or nonverbal interactions with peers that are unpleasant, asocial, nasty, aggressive, or otherwise in violation of classroom rules. Student hits or trips, jerks or wrenches object away, throws object at peer, or calls peer a name. Includes whispering if against classroom rules.

NT NEGATIVE WITH TEACHER
Verbal or non-verbal interactions with teacher that are unpleasant, aggressive, or otherwise in violation of classroom rules. Swears at teacher, pushes, responds with "smart" remark. Must be initiated by the student or as a negative response to a teacher-initiated interaction.

FC FAIL TO COMPLY
Failure to comply with a verbal or non-verbal direction, command, threat or rule made to the student individually or as one of a group. does not include inability to respond to an academic question. Code only in the first interval compliance could reasonably have been expected after the command (up to 12 sec. is allowed). Noncompliance may be coded on successive intervals.

DG DISAPPROVAL GAINED
Verbal or non-verbal disapproval gained from the teacher or another adult directed toward the student alone or as part of a group. It may be general or it may be contingent upon a specific behavior. Includes teacher's physical intervention with student, rebuke, removal of tokens or points, a direction given to a student that includes disapproval, or placement of student in time-out. Time-out

may be coded as a special variable (V3, V4).

V1 **OPEN VARIABLE**

V2 Used when Observer wishes to track selected negative behavior or combination of negative behaviors of particular importance or not adequately described in a routine behavior code. Usually given precedence over other coding options possible during interval as they are of special interest to the observer.

The CBR video disk training program is designed to provide the observer with tutorial instruction for learning the codes and the decision-making rules for coding. Both short and long practice sessions are included to build coding fluency and accuracy. Video scenes depicting various learning environments allow the observer to practice coding skills. Also included in the training program is a computerized explanation of the coding concepts and rules of precedence for decision-making . The CBR video disk training program guides the observer through a series of tutorials and practices.

Five observers were trained using the CBR video disk training program for over 15 hours until each observer reached 85% reliability on three practice videos. During the data collection, observers were retested on the practice videos. All observers continued to attain over 85% reliability in behavioral coding. Inter-observer reliability measures, obtained during 5 field observations in rural classrooms, produced a range from .85 to .89.

PROCEDURES

Observations ranged from minutes to 1 hour in length with a mean of 27 minutes. The length of the observation corresponded to what the observer perceived as a naturally occurring classroom event (i.e. teacher directed math instruction, classroom discussion, seatwork, small cooperative learning groups). Students and teachers in the classroom were blind to the purposes of the study and were told the observation was being made for general educational purposes.

Following data collection all protocols were scored by the observer and checked by another member of the research team. Errors in scoring were minimal, amounting to less than 3% of the total. Demographic data and scores on each of the CBR variables were entered for analysis and checked by a third team member. Missing data amounted to less than 4% of the total.

RESULTS

In order to account for the differing lengths of observations, standard scores were calculated by dividing the raw score in each CBR category by the total time of each observation. Standard scores were used in analysis. ANOVAs were employed to test for differences between students with disabilities and their normative peers on scores in each CBR category. Differences between these groups in fourteen CBR categories were non-significant.

In order to ascertain if there were significant differences in teacher interactions between students with disabilities and normative peers, scores of five CBR variables reflecting teacher interaction with students were summed. The five combined variables were: INSTRUCTIONAL INTERACTION APPROVAL GAINED, DISAPPROVAL GAINED, NEGATIVE WITH TEACHER, POSITIVE WITH TEACHER. ANOVA between students with disabilities and their normative peers indicated no significant differences.

The data was examined to compare the quality and amount of peer interactions between students with disabilities and their normative peers(POSITIVE WITH PEER (PP), NEGATIVE WITH PEER (NP)). Differences regarding either positive and negative interactions were not

significant.

ANOVA calculated for students with disabilities versus normative peers was significant on the CBR variable ATTEND/ON-TASK,(AT), ($F= 3.08$, $p< .01$). CBR scores on the AT variable for students with disabilities observed in this study were significantly less than their normative peers.

To explore which various classroom factors may have had an effect on attention, correlations were conducted on AT scores and various classroom demographies (i.e. class size, number of students with disabilities in classroom and number of adults in classroom). ANOVA was conducted comparing the AT scores of students with disabilities in classrooms with one adult versus the AT scores of students with disabilities in classrooms with two or three adults. The AT scores of students with disabilities in classrooms with 2 or 3 adults was significantly lower than the AT scores of students with disabilities in classrooms with only 1 adult ($F=10.624$ $p<.0014$).

DISCUSSION/IMPLICATIONS

These results feature several points that are important in the examination of rural mainstream settings. Overall, students with disabilities were not observed as differing from their normative peers on several important measures that reflect critical aspects of classroom life. Students with disabilities were not observed to receive either significantly more or less teacher interaction than their peers in the classroom. Students with disabilities were not observed to differ significantly in measures of peer interaction than their normative peers. Therefore, the social interactions of students with disabilities with peers and teachers were quantitatively and qualitatively comparable to that of their normative peers. Students with disabilities were not observed to differ significantly in measures of instructional interaction with the teacher than their peers in the classroom. Students with disabilities did not receive significantly more negative social interaction nor did they consume more instructional interaction from the teacher.

Of critical concern is the finding that students with disabilities are significantly less likely to be observed as attentive (AT) than their normative peers in mainstreamed classroom settings. This finding contradicted any existence of obtrusive overt problematic behaviors. Students with disabilities were displaying passive off task behaviors that restricted their scores regarding ATTEND/ON-TASK (AT) but did not produce overt behaviors that might serve as strong signals to their teachers that they are not attending to class activities. Given the complexity of classrooms, teachers may fail to notice inattention whereas more obtrusive behaviors typically warrant immediate teacher response.

It is unclear if the discrepancy regarding attentive behavior between students with disabilities and their normative peers indicates problems in focusing attention, maintaining attention and/or distractibility. The challenge identified is the need for approaches to catch and hold students attention. When students are unable to attend, a commonly suggested intervention is the placement of additional instructional personnel into the classroom environment (Reif, 1993).
The results of this study appear to contradict this suggested intervention. The presence of additional adults was associated with **lower** levels of attending for students with disabilities. Regardless of the benefits of additional adults in the classroom, it may be that the presence of additional adults in mainstream settings makes the environment more complex and negatively impacts the attention levels of students with disabilities.

The limitations of the findings from this study should also be considered. The data collected was limited to observed behaviors within the parameters of a categorical observation system. The study had no access to measures of student achievement or of products in the classroom. Therefore, it is possible that what appears as inattentive behavior may be accompanied

by learning that is simply not observable. Further we had no knowledge about the roles of additional adults in the classroom. In some cases additional adults were instructional assistants. In other cases, these individuals were co-teachers or parents. Therefore, it is difficult to speculate about whether these adults had defined teaching roles and responsibilities in ways that might improve student attention to task.

In summary, the findings from this observational study indicate that the behaviors of students with disabilities in rural mainstream settings are not overtly different from their normative peers. Students with disabilities do not display behavioral challenges that are likely to instigate immediate teacher response and attention. However, students with disabilities did display differences in attending behaviors. Given the probable relationship between academic engaged time and learning (Rosenshine, 1979) there is sufficient evidence to be concerned about the suitability of these settings for meeting the individual learning needs of students with disabilities.

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